

CLAIMS

1. A video camera arrangement comprising:

5 an image capture device;

a face detector for detecting human faces in the captured video material and for generating face data identifying detected occurrences of faces in the captured video material;

a data handling medium by which data representing the captured images is transmitted and/or stored; and

10 a processor for generating data to be transmitted or stored by the data handling medium in dependence on the detection of faces in the captured images.

2. A camera arrangement according to claim 1, in which the data handling medium comprises:

15 a storage medium for storing the captured images; and

a metadata store for storing metadata associated with the captured video material, the metadata including the face data generated by the face detector.

3. A camera arrangement according to claim 2, in which the metadata store is arranged  
20 to store metadata on the same storage medium as the captured video material.

4. A camera arrangement according to claim 2, in which the metadata store comprises a removable storage device connectable to the camera arrangement.

25 5. A camera arrangement according to claim 2, in which the metadata store comprises:  
a storage device external to the camera arrangement; and  
a wireless link between the camera arrangement and the storage device.

6. A camera arrangement according to any one of claims 2 to 5, in which: the camera  
30 has a lens with an adjustable focus and/or zoom and/or aperture setting; and the metadata includes at least one of the lens focus and/or zoom and/or aperture setting.

7. A camera arrangement according to claim 6, in which the face detector is responsive to the lens focus and/or zoom and/or aperture setting and/or the start and end point of a contiguous video shot.

5 8. A camera arrangement according to any one of claims 2 to 7, in which:  
the face detector is operable to detect a probability of a human face being present in each field or frame of the captured video material; and  
the metadata store is operable to store a representation of at least one face from each contiguous sequence of captured video material, that face being the face having the highest  
10 associated probability from the contiguous sequence.

9. A camera arrangement according to any one of the preceding claims, the camera arrangement being a unitary device.

15 10. A camera arrangement according to any one of the preceding claims, the data handling medium being operable to store and/or transmit data representing captured audio material associated with the captured video material.

11. A camera arrangement according to claim 10, comprising a speech detector; and in  
20 which the face detector is responsive to a detection of speech in the captured audio material.

12. A camera arrangement according to claim 10 or claim 11, having two or more associated microphones, the processor and/or face detector being responsive to audio signals from the microphones to identify a face associated with a current speaker.

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13. A camera arrangement according to any one of claims 10 to 12, comprising logic, responsive to the face detector, to derive a subset of at least some of the captured images for storage and/or transmission by the data handling medium.

30 14. A camera arrangement according to claim 13, in which the subset comprises a cropped image containing at least each face detected by the face detector.

15. A camera arrangement according to claim 13, in which the subset, in respect of a captured image, comprises a number of cropped images equal to the number of detected faces in that captured image, each cropped image representing one detected face.

5 16. A camera arrangement according to claim 15, comprising a user control for selecting display properties of each of the cropped images.

17. A camera arrangement according to claim 16, in which:  
the data handling medium is a transmission medium; and  
10 the user control relates to a remote node of the transmission medium.

18. A camera arrangement according to claim 13, in which the subset, in respect of a captured image, comprises a cropped image representing a single detected face.

15 19. A camera arrangement according to any one of claims 10 to 12, comprising logic to alter a degree of data compression applied to portions of the image in dependence upon whether a face has been detected at those portions.

20. A camera arrangement according to claim 19, being operable to apply a harsher data  
20 compression to portions of a captured image not detected to contain a face.

21. A camera arrangement according to any one of claims 10 to 12, comprising logic, responsive to the face detector, to control the lens zoom and/or direction of the image capture device in dependence upon the face data.

25 22. A video conferencing arrangement comprising two or more camera arrangements according to any one of claims 10 to 21, each camera arrangement having an associated display arrangement, the data handling medium being a transmission medium linking the two or more camera arrangements.

30 23. A security monitoring arrangement comprising a camera arrangement according to any one of claims 10 to 21.

24. A method of operating a video camera arrangement having an image capture device and a storage medium, the method comprising the steps of:

detecting human faces in the captured video material and for generating face data identifying detected occurrences of faces in the captured video material; and

5 generating data representing the captured images for storage and/or transmission, in dependence on the face data generated by the face detector.

25. Computer software having program code for carrying out a method according to claim 24.

10 26. A providing medium for providing program code according to claim 25.

27. A medium according to claim 26, the medium being a storage medium.

15 28. A medium according to claim 26, the medium being a transmission medium.